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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/559,830

12/06/2005

Hiroyuki Minakata

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8198

23838 7590 11/27/2007

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EXAMINER

STRIEB, MICHAEL A

ART UNIT

PAPER NUMBER

4177

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DELIVERY MODE

11/27/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/559,830	<b>Applicant(s)</b> MINAKATA ET AL.	
	<b>Examiner</b> Michael A. Strieb	<b>Art Unit</b> 4177	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10/09/2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 6-28, 32 and 33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-5, 29-31 and 34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 December 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/06/2005, 6/07/2007</u> .                                   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Group 7 (claims 29-31) and generic claims 1-5 and 34 in the reply filed on October 9, 2007 is acknowledged.

Claims 6-28 and 32-33 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on October 9, 2007.

Since the election was made without traverse, the restriction is proper and therefore deemed final.

### ***Information Disclosure Statement***

2. The following documents listed in the Information Disclosure Statement were not considered by the Examiner because English translations were not provided: (JP 10 12341) and H.J. Tiziani ("Optische Grundgesetze").

### ***Drawings***

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: (P1), (P2), and (66); described on pages 162, 162, and 166 respectively. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement

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drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 5, and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura (US 5,671,062) in view of Marvin et al (US 2,908,209).

Regarding **claim 1**, Nakamura discloses a zoom optical system comprising a lens group having negative refracting power and a lens group having positive refracting power (column 5, lines 12-18). Nakamura does not disclose wherein at least one lens is formed by molding of a first lens blank that provides a surface including at least an optical function surface after molding, and a second lens blank that provides a surface other than said surface including at least an optical function surface after molding, wherein the first lens blank and the second lens blank are integrated into a one-piece lens.

Marvin et al disclose wherein at least one lens is formed by molding of a first lens blank that provides a surface including at least an optical function surface after molding, and a second lens blank that provides a surface other than said surface including at least an optical function surface after molding, wherein the first lens blank and the second lens blank are integrated into a one-piece lens (column 4, lines 2-16).

At the time of the invention, it would have been obvious to a person having ordinary skill in the art to combine Marvin et al with Nakamura. The motivation would have been to provide for a lens that allows the passage of light where desired while providing a lens support that prevents edge effects from unwanted leakage of light.

Therefore, it would have been obvious to combine Marvin et al with Nakamura to obtain the invention as disclosed in claim 1.

Regarding **claim 5**, Nakamura in combination with Marvin et al disclose all of the limitations as applied to claim 1 above.

Further, Nakamura discloses a condition pertaining to the thinness of the lens (column 5, lines 52-53). At the time of the invention, it would be obvious for a person of ordinary skill to pursue the range option disclosed in the claim, so as to reduce the weight of the lens.

Regarding **claim 29**, Nakamura in combination with Marvin et al disclose all of the limitations as applied to claim 1 above.

Further, Nakamura discloses that the zoom optical system comprises, in order from an object side thereof, a positive first lens group, a negative second lens group, a positive third lens group, and a positive fourth lens group (column 4, lines 45-54).

Regarding **claim 30**, Nakamura in combination with Marvin et al disclose all of the limitations as applied to claim 29 above.

The range given in the claim optimizes values for the given variables. At the time of the invention, it would have been obvious for a person of ordinary skill to choose from a finite number of predictable solutions. If this leads to the anticipated success, it is likely the product of ordinary skill and common sense.

Regarding **claim 31**, Nakamura in combination with Marvin et al disclose all of the limitations as applied to claim 29 above.

The range given in the claim optimizes values for the given variables. At the time of the invention, it would have been obvious for a person of ordinary skill to choose from a finite number of predictable solutions. If this leads to the anticipated success, it is likely the product of ordinary skill and common sense.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura (US 5,671,062) in view of Marvin et al (US 2,908,209) and in further view of Nakano et al (JP 2003-248106).

Regarding **claim 2**, Nakamura in combination with Marvin et al disclose all of the limitations as applied to claim 1 above.

Nakamura in combination with Marvin et al do not disclose wherein second lens blank has shading capability.

Nakano et al discloses wherein second lens blank has shading capability (paragraphs 0008-0009).

At the time of the invention, it would have been obvious to a person having ordinary skill in the art to combine Nakano et al with Nakamura and Marvin et al. The motivation would have been to more accurately direct the light beam without side effects.

Therefore, it would have been obvious to combine Nakano et al with Nakamura and Marvin et al to obtain the invention as disclosed in claim 2.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura (US 5,671,062) in view of Marvin et al (US 2,908,209) and in further view of Billingsley et al (US 5,812,317).

Regarding **claim 3**, Nakamura in combination with Marvin et al disclose all of the limitations as applied to claim 1 above.

Nakamura in combination with Marvin et al do not disclose wherein said second lens blank is metal, cermet or ceramic.

Billingsley et al disclose wherein lenses are ceramic (column 3, lines 60-65).

At the time of the invention, it would have been obvious to a person having ordinary skill in the art to combine Billingsley et al with Nakamura and Marvin et al. The motivation would have been to provide for a more durable lens.

Therefore, it would have been obvious to combine Billingsley et al with Nakamura and Marvin et al to obtain the invention as disclosed in claim 3.

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura (US 5,671,062) in view of Marvin et al (US 2,908,209) and in further view of Kweon et al (US 6,107,396).

Regarding **claim 4**, Nakamura in combination with Marvin et al disclose the invention as applied in claim 1 above.

Nakamura in combination with Marvin et al do not disclose wherein an organic-inorganic composite material is used as an optical material for at least one optical element that forms a part of said zoom optical system.

Kweon et al disclose wherein an organic-inorganic composite material is used as an optical material for at least one optical element that forms a part of said zoom optical system. (column 3, lines 10-15).



At the time of the invention, it would have been obvious to a person having ordinary skill in the art to combine Kweon et al with Nakamura and Marvin et al. Using the composite material disclosed by Kweon et al is readily available.

Therefore it would have been obvious to combine Kweon et al with Nakamura and Marvin et al to obtain the invention as discloses in claim 4.

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura (US 5,671,062) in view of Marvin et al (US 2,908,209) and in further view of Yamamoto (US 6,535,504).

Regarding **claim 5**, Nakamura in combination with Marvin et al disclose all of the limitations as applied to claim 1 above. As shown above, Nakamura in combination with Marvin et al disclose the need to create a thin lens.

As additional support, Yamamoto discloses particular values that fall within the range given in the claim (Table 1). The motivation for creating a thin lens would have been to decrease the weight and size of the camera as a whole.

Therefore, it would have been obvious to combine Yamamoto with Nakamura and Marvin et al to obtain the invention as disclosed in claim 5.

11. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura (US 5,671,062) in view of Marvin et al (US 2,908,209) and in further view of Kare et al (US 5,541,656).

Regarding **claim 34**, Nakamura in combination with Marvin et al disclose all of the limitations as applied to claim 1 above.

Nakamura in combination with Marvin et al disclose all of the limitations as applied to claim 1 above.

Nakamura in combination with Marvin et al do not disclose an electronic system comprising said zoom optical system and an electronic pickup device located on an image side thereof.

Kare et al disclose an electronic system with an electronic pickup device located on an image side of a lens (column 2, lines 9-11).

At the time of the invention, it would have been obvious to a person having ordinary skill in the art to combine Kare et al with Nakamura and Marvin et al. At the time of the invention, the technique for improving a particular class of devices (i.e. digital cameras) was part of the ordinary capabilities of a person of ordinary skill in the art, in view of the teaching of the technique for improvement in other situations (i.e. film cameras).

Therefore, it would have been obvious to combine Kare et al with Nakamura and Marvin et al to obtain the invention as disclosed in claim 34.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Shirakawa (US 6,635,352 B2) "Coating composition, process for producing optical element using the same, and optical element produced thereby"

Prunier (US 3,118,198) "Method of blocking lens"

Moulton (US 2,250,597) "Ophthalmic lens and method of making same"

13. Any response to this office action should be faxed to (571) 273-8300 or mailed to:

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P.O. Box 1450  
Alexandria, VA 22313-1450

Hand - delivered responses should be brought to:

Customer Service Window  
Randolph Building  
401 Dulany Street

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Strieb whose telephone number is 571-270-3528. The examiner can normally be reached on Monday-Friday 8am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benny Tieu can be reached on (571) 272-7490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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MAS

/Benny Q Tieu/  
Supervisory Patent Examiner, Art Unit 4177